

**State of Utah**  
**Administrative Rule Analysis**  
Revised October 2019

<b>NOTICE OF PROPOSED RULE</b>		
<b>TYPE OF RULE:</b> New ____; Amendment <u>X</u> ; Repeal ____; Repeal and Reenact ____		
<b>Title No. - Rule No. - Section No.</b>		
<b>Utah Admin. Code Ref (R no.):</b>	<b>R307-401</b>	<b>Filing No. (Office Use Only)</b>
<b>Changed to Admin. Code Ref. (R no.):</b> R		

**Agency Information**

<b>1. Agency:</b>	Department of Environmental Quality	
<b>Room no.:</b>	Fourth Floor	
<b>Building:</b>		
<b>Street address:</b>	195 N 1950 W	
<b>City, state:</b>	Salt Lake City, UT84116-3085	
<b>Mailing address:</b>	PO Box 144820	
<b>City, state, zip:</b>	Salt Lake City, UT 84116-3085	
<b>Contact person(s):</b>		
<b>Name:</b>	<b>Phone:</b>	<b>Email:</b>
Liam Thrailkill	801-536-4419	lthrailkill@utah.gov
Please address questions regarding information on this notice to the agency.		

**General Information**

<b>2. Rule or section catchline:</b>
Permit: New and Modified Sources.
<b>3. Purpose of the new rule or reason for the change</b> (If this is a new rule, what is the purpose of the rule? If this is an amendment, repeal, or repeal and reenact, what is the reason for the filing?):
These amendments add and update definitions and testing requirements. These changes will allow sources to discontinue testing after three years of operation if testing demonstrates the emissions have consistently remained below exemption levels. Changes have also been made to clarify that sub-slab vapor mitigation systems are exempt from this rule's testing requirements.
<b>4. Summary of the new rule or change:</b>
Section R307-401-2 is amended to add definitions for "air strippers," "soil aeration," "soil vapor extraction," and "vapor mitigation system." R307-401-10 adds "Vapor Mitigation System" to Source Category Exemptions. Sections R307-401-15 and R307-401-16 are being amended to update testing requirements, which will allow sources to discontinue testing after three years of operation if testing demonstrates the emissions have consistently remained below exemption levels.

**Fiscal Information**

<b>5. Aggregate anticipated cost or savings to:</b>
<b>A) State budget:</b>
These rule changes are expected to have an unknown savings to the state budget as it will limit the need for Division of Air Quality staff to review testing submissions. The savings is unknown because information regarding how many of these would be submitted is unavailable.
<b>B) Local governments:</b>
These rule changes are not expected to have a fiscal impact on local governments.
<b>C) Small businesses</b> ("small business" means a business employing 1-49 persons):

These rule changes could result in a cost savings to small businesses who operate or own sub-slab vapor extraction systems, as this rule exempts them from certain notice of intent and approval order requirements. The aggregate savings is not possible to calculate as the number of soil vapor extractions (SVEs) operating at any given time is not readily available. However, the savings are estimated to range between \$2,800 and \$3,500 per sampling event per stack.

**D) Non-small businesses** ("non-small business" means a business employing 50 or more persons):

These amendments will result in an unknown savings to non-small businesses. Information on how many instances the exemption will apply to an owner or operator of sub-slab vapor mitigation systems is not readily available. However, it is estimated that the savings will range between \$2,800 and \$3,500 per sampling event for each vent riser. Each system will have a specific vent riser count requirement. Stacks can range from four to 10 per project. As currently written, the rule requires each stack to be tested five times in the first year and twice a year after the first year for the life of the project. At a four-stack site this could cost up to \$70,000 in the first year, and up to \$28,000 each subsequent year. Testing would be required for the life of the project.

**E) Persons other than small businesses, non-small businesses, state, or local government entities** ("person" means any individual, partnership, corporation, association, governmental entity, or public or private organization of any character other than an **agency**):

These rule changes are not expected to have a fiscal impact on persons other than small businesses, non-small businesses, state, or local government entities.

**F) Compliance costs for affected persons:**

There are no additional compliance requirements added to this rule through amendments; therefore, there are no compliance costs for affected persons.

**G) Regulatory Impact Summary Table** (This table only includes fiscal impacts that could be measured. If there are inestimable fiscal impacts, they will not be included in this table. Inestimable impacts will be included in narratives above.)

**Regulatory Impact Summary Table**

<b>Fiscal Costs</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
State Government	\$0	\$0	\$0
Local Government	\$0	\$0	\$0
Small Businesses	\$0	\$0	\$0
Non-Small Businesses	\$0	\$0	\$0
Other Person	\$0	\$0	\$0
<b>Total Fiscal Costs:</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Fiscal Benefits</b>			
State Government	\$0	\$0	\$0
Local Government	\$0	\$0	\$0
Small Businesses	\$0	\$0	\$0
Non-Small Businesses	\$0	\$0	\$0
Other Persons	\$0	\$0	\$0
<b>Total Fiscal Benefits:</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Net Fiscal Benefits:</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

**H) Department head sign-off on regulatory impact:**

The head of the Department of Environmental Quality, L. Scott Baird, has reviewed and approved this fiscal analysis.

**6. A) Comments by the department head on the fiscal impact this rule may have on businesses:**

These amendments will result in an unknown savings to non-small businesses, and could result in savings to small businesses. Information on how many instances the exemption will apply to an owner or operator of sub-slab vapor mitigation systems is not readily available. However, it is estimated that the savings will range between \$2,800 and \$3,500 per sampling event for each vent riser. Each system will have a specific vent riser count requirement. Stacks can range from four to 10 per project. As currently written, this rule requires each stack to be tested five times in the first year and twice a year after the first year for the life of the project. At a four-stack site this could cost up to \$70,000 in the first year, and up to \$28,000 each subsequent year. Testing would be required for the life of the project.

**B) Name and title of department head commenting on the fiscal impacts:**

L. Scott Baird, Interim Executive Director

**Citation Information****7. This rule change is authorized or mandated by state law, and implements or interprets the following state and federal laws. State code or constitution citations (required):**

19-2-108	19-2-104	

**Incorporations by Reference Information**

(If this rule incorporates more than two items by reference, please include additional tables)

**8. A) This rule adds, updates, or removes the following title of materials incorporated by references** (a copy of materials incorporated by reference must be submitted to the Office of Administrative Rules; *if none, leave blank*):

	First Incorporation
Official Title of Materials Incorporated (from title page)	
Publisher	
Date Issued	
Issue, or version	

**B) This rule adds, updates, or removes the following title of materials incorporated by references** (a copy of materials incorporated by reference must be submitted to the Office of Administrative Rules; *if none, leave blank*):

	Second Incorporation
Official Title of Materials Incorporated (from title page)	
Publisher	
Date Issued	
Issue, or version	

**Public Notice Information**

**9. The public may submit written or oral comments to the agency identified in box 1.** (The public may also request a hearing by submitting a written request to the agency. The agency is required to hold a hearing if it receives requests from ten interested persons or from an association having not fewer than ten members. Additionally, the request must be received by the agency not more than 15 days after the publication of this rule in the Utah State Bulletin. See Section 63G-3-302 and Rule R15-1 for more information.)

**A) Comments will be accepted until** (mm/dd/yyyy): 01/15/2020

**B) A public hearing (optional) will be held:**

On (mm/dd/yyyy):	At (hh:mm AM/PM):	At (place):
01/15/2020	01:00	Multi Agency State Office Building 195 N 1950 W. Salt Lake City, UT 84116 Fourth Floor. Division of Air Quality.


<b>10. This rule change MAY* become effective on (mm/dd/yyyy):</b>	03/04/2020
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\*NOTE: The date above is the date on which this rule MAY become effective. It is NOT the effective date. After the date designated in Box 10, the agency must submit a Notice of Effective Date to the Office of Administrative Rules to make this rule effective. Failure to submit a Notice of Effective Date will result in this rule lapsing and will require the agency to start the rulemaking process over.

#### Agency Authorization Information

**To the agency:** Information requested on this form is required by Sections 63G-3-301, 302, 303, and 402. Incomplete forms will be returned to the agency for completion, possibly delaying publication in the *Utah State Bulletin*, and delaying the first possible effective date.

<b>Agency head or designee, and title:</b>	Bryce Bird, Director	<b>Date</b> (mm/dd/yyyy):	
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**R307. Environmental Quality, Air Quality.**  
**R307-401. Permit: New and Modified Sources.**

**R307-401-2. Definitions.**

"Actual emissions" (a) means the actual rate of emissions of an air pollutant from an emissions unit, as determined in accordance with R307-401-2(b) through R307-401-2(d).

(b) In general, actual emissions as of a particular date shall equal the average rate, in tons per year, at which the unit actually emitted the air pollutant during a consecutive 24-month period which precedes the particular date and which is representative of normal source operation. The director shall allow the use of a different time period upon a determination that it is more representative of normal source operation. Actual emissions shall be calculated using the unit's actual operating hours, production rates, and types of materials processed, stored, or combusted during the selected time period.

(c) The director may presume that source-specific allowable emissions for the unit are equivalent to the actual emissions of the unit.

(d) For any emissions unit that has not begun normal operations on the particular date, actual emissions shall equal the potential to emit of the unit on that date.

"Best available control technology" means an emissions limitation (including a visible emissions standard) based on the maximum degree of reduction for each air pollutant which would be emitted from any proposed stationary source or modification which the director, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant. In no event shall application of best available control technology result in emissions of any pollutant which would exceed the emissions allowed by any applicable standard under 40 CFR parts 60 and 61. If the director determines that technological or economic limitations on the application of measurement methodology to a particular emissions unit would make the imposition of an emissions standard infeasible, a design, equipment, work practice, operational standard or combination thereof, may be prescribed instead to satisfy the requirement for the application of best available control technology. Such standard shall, to the degree possible, set forth the emissions reduction achievable by implementation of such design, equipment, work practice or operation, and shall provide for compliance by means which achieve equivalent results.

"Air Strippers" are systems designed to pump groundwater to the surface for treatment, usually by aeration.

"Building, structure, facility, or installation" means all of the pollutant-emitting activities which belong to the same industrial grouping, are located on one or more contiguous or adjacent properties, and are under the control of the same person (or persons under common control) except the activities of any vessel. Pollutant-emitting activities shall be considered as part of the same industrial grouping if they belong to the same Major Group (i.e., which have the same two-digit code) as described in the Standard Industrial Classification Manual, 1972, as amended by the 1977 Supplement (U.S. Government Printing Office stock numbers 4101-0066 and 003-005-00176-0, respectively).

"Construction" means any physical change or change in the method of operation (including fabrication, erection, installation, demolition, or modification of an emissions unit) that would result in a change in emissions.

"Emissions unit" means any part of a stationary source that emits or would have the potential to emit any air pollutant.

"Fugitive emissions" means those emissions which could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening.

"Indirect source" means a building, structure, facility, or installation which attracts or may attract mobile source activity that results in emission of a pollutant for which there is a national standard.

"Potential to emit" means the maximum capacity of a stationary source to emit an air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is enforceable. Secondary emissions do not count in determining the potential to emit of a stationary source.

"Secondary emissions" means emissions which occur as a result of the construction or operation of a major stationary source or major modification, but do not come from the major stationary source or major modification itself. Secondary emissions include emissions from any offsite support facility which would not be constructed or increase its emissions except as a result of the construction or operation of the major stationary source or major modification. Secondary emissions do not include any emissions which come directly from a mobile source, such as emissions from the tailpipe of a motor vehicle, from a train, or from a vessel.

"Soil Aeration" is an ex-situ treatment process where excavated soil from a remediation project is spread in a thin layer to encourage biodegradation of soil contamination. Biodegradation may be stimulated through aeration or the addition of minerals, nutrients, and/or moisture.

"Soil Vapor Extraction", or SVE, is a system designed to extract vapor phase contaminants from the subsurface. SVE systems are often combined with other technologies, such as air sparging or vacuum-enhanced recovery systems.

"Stationary source" means any building, structure, facility, or installation which emits or may emit an air pollutant.

"Vapor Mitigation System", or VMS, is a sub-slab system whose primary purpose is mitigating vapor intrusion into an occupied, or occupiable, structure and is not intended or designed for the remediation of contaminated soil or groundwater. This definition includes

both active and passive systems. Passive systems consist of a vapor barrier either below or above the slab of a structure and a venting system installed under a structure to divert vapor from beneath the structure to the sides or roofline of a structure. Active systems are similar to passive systems but incorporate a blower or fan to actively extract air from beneath the structure.

#### **R307-401-10. Source Category Exemptions.**

The source categories described in R307-401-10 are exempt from the requirement to obtain an approval order found in R307-401-5 through R307-401-8. The general provisions in R307-401-4 shall apply to these sources.

(1) Fuel-burning equipment in which combustion takes place at no greater pressure than one inch of mercury above ambient pressure with a rated capacity of less than five million BTU per hour using no other fuel than natural gas or LPG or other mixed gas that meets the standards of gas distributed by a utility in accordance with the rules of the Public Service Commission of the State of Utah, unless there are emissions other than combustion products.

(2) Comfort heating equipment such as boilers, water heaters, air heaters and steam generators with a rated capacity of less than one million BTU per hour if fueled only by fuel oil numbers 1 - 6,

(3) Emergency heating equipment, using coal or wood for fuel, with a rated capacity less than 50,000 BTU per hour.

(4) Exhaust systems for controlling steam and heat that do not contain combustion products.

(5) A well site as defined in 40 CFR 60.5430a, including centralized tank batteries, that is not a major source as defined in R307-101-2, and is registered with the Division as required by R307-505.

(6) A gasoline dispensing facility as defined in 40 CFR 63.11132 that is not a major source as defined in R307-101-2. These sources shall comply with the applicable requirements of R307-328 and 40 CFR 63 Subpart CCCCCC: National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities.

(7) A Vapor Mitigation System as defined in R307-401-2.

#### **R307-401-15. Air Strippers and Soil Vapor Extraction Systems~~[Venting Projects]~~.**

R307-401-15 applies to remediation systems with the potential to generate air emissions, such as air strippers and soil vapor extraction (SVE) as defined in R307-401-2.

(1) The owner or operator of an air stripper or SVE remediation system~~[soil venting system that is used to remediate contaminated groundwater or soil]~~ is exempt from the notice of intent and approval order requirements of R307-401-5 through R307-401-8 if the following conditions are met:

(a) ~~[the estimated total air]~~actual emissions of volatile organic compounds from a given project are less than 5 tons per year; and~~[the de minimis emissions listed in R307-401-9(1)(a), and]~~

(b) emission rates of~~[the level of any one hazardous air pollutant or any combination of]~~ hazardous air pollutants are~~[is]~~ below their respective threshold values contained~~[the levels listed]~~ in R307-410-5(1)(c)(i)(C).

(2) The owner or operator shall submit documentation to the director that demonstrates the project meets the exemption criteria~~[requirements]~~ in R307-401-15(1)~~[to the director prior to beginning the remediation project]~~. Required documentation includes, but is not limited to:

(a) project summary, including location, system description, operational schedule, and schedule for construction;

(b) emission calculations and any laboratory sampling data used in calculations; and

(c) plans and specifications for the system and equipment.

(3) After beginning the soil remediation project, the owner ~~[or operator shall submit emissions information to the director to verify that the emission rates of the volatile organic compounds and hazardous air pollutants in R307-401-15(1) are not exceeded.]~~ or operator shall conduct testing to demonstrate compliance with the exemption levels in R307-401-15(1)(1) and (b). Monitoring and reporting shall be conducted as follows:

(a) ~~[Emissions estimates of volatile organic compounds shall be based on test data obtained in accordance with the test method in the EPA document SW-846, Test #8260c or 8261a, or the most recent EPA revision of either test method if approved by the director.]~~ Emissions for air strippers shall be based on the following:

(i) influent and effluent water samples analyzed for volatile organic compounds and hazardous air pollutants using the most recent version of USEPA Test Method 8260, Method 8021, or other EPA approved testing methods acceptable to the director; and

(ii) design water flow rate of the system or the water flow rates measured during the sample period.

(b) ~~[Emissions estimates of hazardous air pollutants shall be based on test data obtained in accordance with the test method in EPA document SW-846, Test #8021B or the most recent EPA revision of the test method if approved by the director.]~~ Emissions for SVE systems shall be based on the following:

(i) Air samples collected from a sample port in the exhaust stack of the SVE system and analyzed for volatile organic compounds and hazardous air pollutants using USEPA test method TO-15, or other EPA approved testing methods acceptable to the director.

(ii) Design air flow rate of the system or the air flow rates measured at the

outlet of the SVE system during the sample period. Flow rates should be measured and reported at actual conditions.

(c) ~~[Results of the test and calculated annual quantity of emissions of volatile organic compounds and hazardous air pollutants shall be submitted to the director within one month of sampling.]~~ Within one month of sampling, the owner or operator shall submit to the director the sample results, estimated emissions of volatile organic compounds, and estimated emission rates of hazardous air pollutants.

(d) ~~[The test samples shall be drawn on intervals of no less than twenty-eight days and no more than thirty-one days (i.e., monthly) for the first quarter, quarterly for the first year, and semi-annually thereafter or as determined necessary by the director.]~~ Samples shall be collected at the following frequencies or more frequently as determined necessary by the director:

(i) no less than twenty-eight days and no more than thirty-one days (i.e., monthly) after startup for the first quarter;

(ii) quarterly for the remainder of the first year; and

(iii) semi-annually thereafter for the life of the project or as allowed in R307-401-15(3)(f).

(e) If an SVE or air stripper system is restarted after rehabilitation or an extended period of shutdown, the owner or operator shall recommence the sampling schedule in R307-415(3)(d), unless otherwise approved by the director.

(f) The owner or operator may request to discontinue sampling after three years of operation. To discontinue sampling, the owner or operator must submit to the director a request to discontinue monitoring.

(i) The request must include documentation demonstrating emissions have remained below the exemption levels in R307-401-15(1)(a) and (b) since startup of the system.

(ii) The request is subject to approval from the director upon consultation with other regulatory agencies involved in the project, such as Division of Environmental Response and Remediation or Division of Waste Management and Radiation Control.

(4) The following control devices do not require a notice of intent or approval order when used in relation to an air stripper or soil vapor extraction system that is ~~[venting project]~~ exempted under R307-401-15:

(a) thermodestruction unit with a rated input capacity of less than five million BTU per hour using no other auxiliary fuel than natural gas or LPG, or

(b) carbon adsorption unit.

#### **R307-401-16. ~~[De minimis Emissions From]~~ Soil Aeration Projects.**

R307-401-16 applies to soil aeration projects used to conduct soil remediation. ~~[An owner or operator of a soil remediation project is not subject to the notice of intent and approval order requirements of R307-401-5 through R307-401-8 when soil aeration or land farming is used to conduct a soil remediation, if the owner or operator submits the following information to the director prior to beginning the remediation project:]~~

(1) ~~[documentation that the estimated total air emissions of volatile organic compounds, using an appropriate sampling method, from the project are less than the de minimis emissions listed in R307-401-9(1)(a);]~~ The owner or operator of a soil aeration project is not subject to the notice of intent and approval order requirements of R307-401-5 through R307-401-8, if the following conditions are met:

(a) emissions of volatile organic compounds from a given soil aeration project are less than 5 tons per year; and

(b) emission rates of hazardous air pollutants are below their respective threshold values contained in R307-410-(1)(c)(i)(C).

(2) ~~[documentation that the levels of any one hazardous air pollutant or any combination of hazardous air pollutants are less than the levels in R307-410-5(1)(d); and]~~ The owner or operator shall submit documentation to the director demonstrating the project meets the exemption criteria in R307-401-16(1). The owner or operator shall receive approval from the director for the exemption prior to beginning the remediation project. Required documentation includes, but is not limited to:

(a) calculated emissions of volatile organic compounds and estimated emission rates of hazardous air pollutants from all soils to be treated from the soil aeration project.

(b) Emission calculations shall be based on soil samples of the soils to be remediated. Samples shall be analyzed for volatile organic compounds and hazardous air pollutants using the most recent version of USEPA Test Method 8260, Method 8021, or other EPA approved testing methods acceptable to the director. Emission calculations should be based on the methodology in EPA guidance "Air Emissions from the Treatment of Soils Contaminated with Petroleum Fuels and Other Substances" (EPA-600/R-92-124) or other methodology acceptable to the director.

(c) Location where soil aeration will occur and where the remediated material originated.

(3) ~~[the location of the remediation and where the remediated material originated.]~~ The owner or operator is exempt from the reporting requirements in R307-401-16(2) if excavated soils are disposed of at a

disposal or treatment facility, such as a landfill, solid waste management facility, or a landfarm facility, that is owned or operated by a third party and operates under an existing approval order.

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**KEY: air pollution, permits, approval orders, greenhouse gases**

**Date of Enactment or Last Substantive Amendment: June 6, 2019**

**Notice of Continuation: May 15, 2017**

**Authorizing, and Implemented or Interpreted Law: 19-2-104(3)(q); 19-2-108**